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HEALTH ORGANIZATION IN CENTRAL AMERICA

THESIS

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CONTENTS

HEALTH ORGANIZATION IN CENTRAL AMERICA

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1. Introduction. - In considering the historical development of health organization in Central America, the lack of records dealing with the early efforts of the Central American Governments in this direction has been the source of considerable difficulty. In most of the countries many of the government records have been destroyed during upheavals which led to the overthrow of the existing governmental regime, Costa Rica alone having preserved all government records intact. For this reason the records of Costa Rica will be used in considering the early development of public health organization in Central America.

2. Early Health Organization. - As has been the case in practically all civilized countries, early efforts at protecting the public health in Central America were brought about by the destructive effects of epidemics. I have been unable to get records and documents dealing with these early efforts at public health organization from any of the Central American countries except Costa Rica. For this country

a compilation of all laws, decrees, official regulations and circulars which had to do with the protection of the public health between the years 1821 and 1920 has been published, and from these laws and regulations I have selected a number which, insofar as I have been able to ascertain, typify the embryonic efforts made by the governments of the Central American republics to protect the public health during epidemics and which led, later, to efforts at the creation of organized public health authorities endowed with powers and guided by appropriate legislation directed toward the protection of the public health during inter-epidemic periods.

During the year 1836, Asiatic cholera was present in several of the Central American republics. It first appeared in the republics of Guatemala, El Salvador and Honduras, reaching Nicaragua early in May of that year. When Costa Rica was threatened from Nicaragua on the North, and the province of Panamá (Columbia) on the South, the General Assembly authorized the Executive to take such emergency measures as might be deemed advisable to protect the country from an invasion of the "dreaded pestilence". On being given such emergency powers, the President issued a decree (which, under such circumstances, has the effect of law) establishing for the emergency the supremecy of sanitary authority, designated as "Sanitary Police"

(Policía de Salubridad - a status resembling martial law). This decree reads, in part, as follows:

> "It being one of the prime duties of government to take such measures as may be nenessary to protect the public from the ravages of epidemics, and in view of the fact that the Sanitary Police has been recognized as one of the most efficient means of preventing their disastrous effects, in use of the powers conferred on me by Act of Congress of December 13th, 1835, I hereby decree:
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> "Art. 1. The Sanitary Police shall be rigorously observed by all inhabitants of the State, without distinction of sex, age, privilege or class by complying with all regulations which, to this end, may be promulgated by all tribunals and authorities created for this purpose by this act.
>
> "Art. 2. All persons who refuse obedience to such regulations as may be promulgated will be considered negligent and inhumane and will be held subject to such penalties as the Tribunals and the Minister of Police may, under the circumstances, deem expedient."

The decree then provides for the establishment of lazarets (in case they should be required) and establishes sanitary regulations governing the collection of garbage, the suppression of "foul and pestilential odors", cleaning of premises, the removal of stagnant water, etc., and even establishes certain regulations regarding personal

hygiene, specifying that all individuals shall "bathe and change clothing frequently, and shall abstain from all excesses in eating, particularly as regards the quality of food", and that they shall "sun and air all clothing and bed clothing twice a week." These regulations are given under the heading "Interior Police of Habitations". Under the heading "Exterior Police", regulations governing public gatherings, closing of churches and schools, street cleaning, clearing away of vegetation in open spaces, the sale of foodstuffs, the sale of intoxicating liquors, curfew laws, etc., were promulgated. Most of these regulations were to become effective at once; those having to do with the isolation and care of the sick were to become effective only on the appearance of the disease in a given parish - which was the smallest governmental unit at that time.

The country was divided into five sanitary districts by this decree, and a general board of health, to have jurisdiction over the entire country, was provided for. This general board of health was composed of the following members: The Principal Minister of Police, two licentiates in medicine, one general, four colonels and the parish priest of the capital city. The physicians (licenciados), the general and the four colonels were named in the decree. A district board of health was provided for each of the

five sanitary districts, the general board of health acting as the board of health of the sanitary district comprising the capital. The district boards of health for the four remaining sanitary districts were to be composed of the local Minister of Police, the parish priest and three citizens, these latter to be chosen from among the "educated class, and by preference those having some learning in the art of medicine." The general board of health was to promulgate sanitary regulations for the entire country, and the local boards were to make such regulations as local conditions might warrant, these regulations to be submitted to the general board of health for approval.*

Aside from the organization of a body of sanitary police, whose duties should consist in making inspections

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* An interesting comparison may be made between the effect which the threatening invasion of cholera had on the civil authorities of this little Central American republic and that produced on the English civil authorities by the great epidemic of cholera which scourged the British Isles in 1832, and the later epidemics of 1849. As a result of the epidemic of 1832, a "Sanitary Commission" was appointed in 1843. This body investigated the cause of the disease, rendered a report - and went out of existence. Early in 1846, when cholera again threatened, the "Health of Towns Bill" was introduced into Parliament, but was withdrawn, at the request of the Secretary of State, who promised that "the subject will receive the attention of Government during the next session." The bill was again introduced in 1847, but failed of passage. During August, 1848, the bill was finally passed, and in September of the same year the first general or central board of health to be formed in England was organized. This board consisted of the original Sanitary Commission, a president and two additional medical members. The board held its first meeting after cholera had been announced in Paris; early in 1849 cholera again made its appearance in England. 2-3

to ascertain whether or not the sanitary regulations were being complied with and the collection of fines in cases where individuals had been convicted of "negligence and inhumanity" on account of not having complied with the regulations, I can find no further record of the activities of this general board of health or any of its subsidiary boards. As cholera increased in Nicaragua (1837) a cordon sanitaire was established along the frontier between Costa Rica and Nicaragua by Presidential decree - and here the record ends.*

From subsequent records it would appear that a Faculty of Medicine was later created (1849). I am unable to find records of other sanitary legislation until 1857, however. At this time a resolution was passed by Congress calling attention to the desirability of creating a national council of hygiene, which should act as an advisory body to the civil authorities. Acting under this authorization, the President, by decree, created such a council. This body was called the Protomedicato; and in order that it might be truly representative of the medical profession - which was becoming recognized as the profession which should

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* While I have been unable to find any official records of the establishment of temporary sanitary commissions, or boards of health, appointed for the purpose of combating cholera in the other Central American republics, I am told that such commissions were appointed. No permanent sanitary organizations came into being as a result of the interest in public health matters aroused by the epidemic, however, Costa Rica alone taking steps towards effecting a permanent public health organization in the country in 1857, as will be seen further on in the text.

possess the most knowledge of the causation and prevention of disease, a Medical Association, which was to be composed of all licentiates in medicine, surgery, pharmacy, dentistry and midwifery, was instituted. The Board of Governors of the Medical Association was to constitute the Protomedicato.

The decree creating the Medical Association and the Protomedicato is of considerable historical interest, for reasons which will be given later, and will be given in full. In free translation it reads as follows:

"JUAN RAFAEL MORA

"Constitutional President of the Republic of Costa Rica

"In consideration of the fact that the Very Excellent Constitutional Congress has decreed as follows:

> "The very Excellent Congress of the Republic of Costa Rica, Considering: That in order to utilize the progress of the medical sciences in Costa Rica in fostering the protection of the public health, (Resolves) that it is urgently necessary that all professionals who are authorized to practice medicine in Costa Rica shall recognize some central governing body which may dispose of all questions referred to it by the Supreme Government, subjecting themselves, on the other hand, to all laws and regulations governing the practice of medicine;

HEREBY DECREES:

"Art. 1. There is hereby established in the Republic a Protomedicato and a Medical Association. The former,

considered as a Medical Tribunal, shall be composed of a Protomédico, President of the Tribunal, who shall also be the President of the Medical Society; two appointive members (vocales), a censor and a secretary, who shall also act as a medical notary of the Tribunal. The latter, literary in character, shall be composed of all doctors, licentiates in medicine and surgery, pharmacists, obstetrical surgeons and dentists actually existing in the country, whose titles are valid and to whom a license to practice their respective professions has been extended by virtue of the possession of such titles.

"Art 2. For the first time the Executive will appoint all members of the Tribunal, observing the following restrictions:

"1. The Protomédico (President of the Tribunal) shall be:

"(a) A citizen of the Republic, in full exercise of his rights of citizenship, and of known probity;

"(b) A doctor in medicine and surgery, incorporated according to the regulations of the Medical Faculty of the University; and

"(c) Shall possess the rights of seniority, as shown by his titles.

"2. The medical notary (secretary) shall be:

"(a) A citizen in full exercise of the rights of citizenship, and of known honesty and probity; and

"(b) He shall possess a knowledge of forensic surgery and legal medicine.

"3. The appointive members shall possess the full rights of citizenship and must be of known probity.

"Art. 3. In the future all appointments will be made by the Executive, on the recommendation of the Medical Tribunal, which will present the names of alternates for each position to be filled. These will hold office for four years, and may be re-elected, if this will best serve the public interest.

"Art. 4. The Medical Tribunal will submit to the Supreme Government a project of rules and regulations which shall fix its duties and govern its procedure, as well as rules and regulations governing the Medical Society.

"Art. 5. On the first of January, 1858, the Protomedicato will be installed, and to this end the Supreme Government will dictate all measures necessary for its installation.

"Art. 6. The second Sunday following the installation of the Medical Tribunal the Medical Society will be inaugurated, and to this end the President of the Tribunal (Protomédico nato de la Corporación) will summons all individuals mentioned in Article 1 to meet in the Hall of Sessions of the University, where (if two-thirds of the number

be present) the installation shall take place. The ceremony of the installation shall be opened by an appropriate address by the President.

"Art. 7. After the installation of the Medical Society, this body shall proceed to elect two members (vocales) and a secretary. (These two members and the secretary, while not so stated in the decree, are evidently the appointive members and secretary of the Tribunal mentioned in Article 2 of the decree).

"Art. 8. Section 4 of the regulation of the 4th of October, 1849, which established the Faculty of Medicine of the University, is hereby repealed." [1]

The Protomedicato submitted a project of rules and regulations, as required in Article 4 of the foregoing act, for the consideration of the Government on June 15, 1858. These rules and regulations were approved by the Executive, and thus became law. Under these regulations the Medical Tribunal became the medical licensure board of the Republic. All doctors or licentiates of medicine and surgery, obstetricians, pharmacists, dentists and "blood letters" not holding licenses to practice their professions at the time that the act went into force, were required to submit to an examination by this board and obtain a license before being allowed to practice their professions in the country.

The body was also constituted the Tribunal of Public Health Police and in this capacity it became the board of health of the Republic. Rules and regulations emitted by this board, upon approval by the Executive, constituted the sanitary code which governed all public health procedure, and all provincial governors, chiefs of police, justices of the peace and special police agents (Comisarios), were charged with the enforcement of the regulations of the sanitary code, under the direction of the board of health or its authorized agents.*

3. The Faculty of Medicine Idea. - In 1872 the President modified the early health law of Costa Rica, the

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* It is interesting to note that at least two states of the American Union (Alabama and South Carolina) have, at the present time, health organizations closely resembling this early organization in Costa Rica. In 1875 the legislature of the State of Alabama enacted a law which constituted the State Medical Association as the State Board of Health. The Board of Censors of the Association acts as a State Committee of Public Health. This board elects an executive officer, who is known as the State Health Officer. Acting through its executive officer (the State Health Officer), the State Committee of Public Health supervises and directs the administration of the public health and quarantine laws of the state. It also acts as a medical licensure board. [4]

The Medical Association of the State of South Carolina was constituted as the State Board of Health by an act of the Legislature approved December 23, 1878. The Executive Committee of the State Medical Association, appointed by the Governor, on recommendation of the Medical Association, acts as a board of health in the intervals of the meetings of the State Board of Health (State Medical Association) and through its executive officer (the State Health Officer) this body directs the administration of all public health laws of the State and acts as a "sole advisor of the State in all questions involving the protection of the public health within its limits,"[5]

"Medical Faculty" (Facultad de Medicina) taking the place of the Medical Association. All physicians, surgeons and pharmacists were designated as "Professors of the Faculty"; all "specialists", such as dentists, oculists, "blood-letters" and obstetricians, were also considered members of the Faculty but were not dignified with the professorial title. The members of the Protomedicato were to be chosen from among the professors of medicine and surgery and other members of the Medical Faculty. It still constituted the national council of hygiene, as well as the medical licensure board, and was still looked upon as the governing board of the Medical Faculty. The connection between the Medical Faculty (Medical Association) and the council of hygiene was a very loose one, however, members of the Faculty enjoying the privilege of attending the meetings of the Protomedicato when that body was not "considering questions of a private nature". No provision was made for the Protomedicato to call the Faculty of Medicine together in general sessions to consider public health matters, as was the case with the Medical Association.

This Faculty of Medicine idea seems to have taken root in all of the Central American countries, all early sanitary regulations of the other Central American republics being promulgated "on recommendation of the Faculty of Medicine". In no case did the Faculty of Medicine, or

its governing board (if such existed), constitute a board of health, in the strictest sense of the word, however. In some instances the entire Faculty was looked upon as an advisory council in hygiene, whereas in others the Faculty designated a committee from among its members which should act in an advisory capacity to the civil authorities. In most instances, however, the police authorities of the country promulgated sanitary regulations without consulting with the Faculty of Medicine, or the advisory council. These sanitary regulations were rarely carried into effect, owing to the fact that "sanitary authority lacked the basic scientific organization so vitally essential to the successful operation of all sanitary law."[6] One Minister of Police would promulgate sanitary regulations to meet emergency conditions, or even attempt to regulate such matters as vaccination, venereal prophylaxis or maritime quarantine, but his efforts met with little success on account of the fact that no machinery existed to carry these regulations into effect. In addition, his successor (there were frequent changes in cabinet positions in those days) might have different ideas and annul what his predecessor had done before the provisions of any given sanitary regulation might become effective. This chaotic state of affairs resulted in great wastefulness in connection with all efforts at public sanitation. One Minister might decide to establish isolation hospitals and sterilization

plants and secure money for outfitting such plants, only to have his efforts undone by someone else - after the necessary equipment had been ordered and was even en route. This lack of centralized public health authority, with its resultant wastefulness and inefficiency, has done much to bring public health work into disrepute and has been one of the principal causes of the backwardness of these countries in the matter of public health organization. Such health administration as was attempted was entrusted to civil authorities having no special knowledge of sanitation. These authorities were to be advised, as a rule, by the Faculty of Medicine, or the national council of hygiene. The council, while usually spoken of as a board of health, had no administrative powers, and none of its members were paid officials. The advice of the council was not binding on the civil authorities and, as has already been stated, a Minister of Police might promulgate sanitary regulations or bring into being important sanitary organizations, without even consulting the council, although the decrees establishing such organizations or promulgating sanitary regulations were usually prefaced by a statement which indicated that such a step had been taken, after consulting the council, or the Faculty of Medicine (A propuesto de la Facultad de Medicina, or a propuersto del Consejo Nacional de Hygiene - "On recommendation of the Faculty of

Medicine" or "On recommendation of the National Council of Hygiene").

It was not until 1890 that one of the Central American governments (El Salvador) took steps to correct this vital defect in health organization by establishing a national board of health (as distinguished from a council of hygiene, which was purely an advisory body), which should be entrusted with the management of health administration. Guatemala followed in 1906, Honduras in 1910, Nicaragua in 1915, and finally Costa Rica (which had been most fruitful in sanitary legislation) in 1920.

Since the health organizations of these five countries differ materially, a brief description as provided for in the organic public health law for each country will be given, as well as a brief description of the organization existing at the present time. These descriptions will be given in chronological order: Salvador (1900), Guatemala (1906), Honduras (1910), Nicaragua (1915), and Costa Rica (1920).

4. Establishment of Boards of Health. -

(1) El Salvador. - During the session of 1900, the National Legislative Assembly of the Republic of El Salvador enacted a law establishing a superior board of health (Consejo Superior de Salubridad). This effort at improving the

sanitary organization was the direct result of the epidemic of yellow fever which began in 1894 and lasted until 1902, yellow fever being epidemic in Salvador between these dates. The board of health directed practically all of the early efforts toward eradicating yellow fever, and was finally successful in 1902. In May of 1900, a special commission, appointed for that purpose, submitted a project of an organic public health law, which was adopted late in that year. The board of health, as constituted by this law, consisted of a president, who was a physician (President Médico), a medical member (vocal médico), a pharmacist member (vocal farmaceutico), an engineer member (vocal ingeniero), a lawyer member, (vocal abogado) and a secretary, who was a student of medicine in the advanced years. The board issued sanitary regulations from time to time and established disinfecting plants in all of the ports of the country for protecting the country from an invasion of bubonic plague, which was then present on the western coast of Mexico. It later established a vaccination service, as well as medical inspection of schools in the Capital (San Salvador). In 1914 all of the sanitary regulations which had been issued by the board were codified and published as the sanitary code (Código de Sanidad). This sanitary code provided for the management of public health administration by the superior board of health, through its delegates, as well as through special sanitary agents (Agentes Sanitarios). Each

department, or province, was presided over by a departmental delegate (Delegado Departmental), who was appointed by the Minister of Police, on recommendation of the board of health. The actual enforcement of the provisions of the sanitary code was entrusted to civil authorities, departmental governors, municipal mayors, captains of ports, directors of police, administrators of hospitals, and military physicians being considered (Auxiliares de la Administración Sanitaria)"auxiliaries of the sanitary administration". While this system of public health administration was a great advance over the former one, it became evident that it was desirable "to give the Sanitary Institutions of the country a new organization, more capable of efficiently protecting the health of the Salvadoranean public",[6] and the Direction General of Public Health (Dirección General de Sanidad) was created by act of the Legislature early in 1920. The Direction General of Public Health, as it exists today, is composed of a director general and six chiefs of section. A board of health, as such, does not now exist, the director general of public health and the six chiefs of section now constituting the supreme sanitary authority in the country. The director general of public health, after consultation with his chiefs of section, submits projects of sanitary regulations to the Minister of Government and Police, which, when approved and published in the Official Gazette, become law. When meeting as a

body the chiefs of section constitute an advisory council to the director general, thus replacing the board of health. The Direction General of Public Health is constituted as follows:

(1)The Director General, who exercises general control over all sanitary matters, as well as over the different sections of the sanitary organization.

(2) First Section: Maritime Sanitation and Prophylaxis, Disinfection, Urban and Rural Sanitation, Cemeteries (burial and exhumations) and Supervigilance over the Practice of Medicine and Allied Professions.

(3) Second Section: Venereal Prophylaxis, Epidemiology, School, Industrial and Infant Hygiene and the Bacteriological Service.

(4) Third Section: Demography and Vital Statistics, Vaccination and Preventive Inoculations, and Health Education.

(5) Fourth Section: Inspection of Food Products and Municipal Sanitation.

(6) Fifth Section: Sanitary Engineering, Sanitary Police and Railway Sanitation.

(7) Sixth Section: Complaints and Denunciations, Prosecutions, etc. (Legal Section).

In addition to these six sections there is a central, administrative office, or bureau of administration,

in charge of a secretary. Laterly school hygiene has been made a separate section (formerly part of Section II) and a section of laboratories has been organized (formerly part of Section II). The director general of public health devotes practically all of his time to his public duties, but the chiefs of section are part-time officials. The departmental (sanitary) delegates, also, devote only part of their time to the performance of their duties as departmental health officers. These departmental sanitary delegates are assisted by agents or inspectors, who have a certain measure of police power. In all of the towns of the country local boards of health, composed of a president and one or more members (vocales) have been organized. These local boards of health are under the direction of the departmental health officers, and their chief function would seem to be that of giving "local color" to the work of the national department of health, which, through its departmental delegates and sanitary agents, or inspectors, is responsible for all the practical public health work done in the country.

The International Health Board has been cooperating with the national department of health in conducting a campaign for the control of hookworm disease since early in 1916. The Yellow Fever Commission of the International Board also cooperated with the department of health in

stamping out yellow fever, which was epidemic in the country from early in 1919 until about the middle of 1920. The campaign for the control of hookworm disease in conducted by a division of the health department denominated Department of Uncinariasis, while the campaign against yellow fever was conducted by a special commission, named by the Minister of Police, on the recommendation of the director general of public health. This commission was composed of three members, the representative of the Yellow Fever Commission being the technical director.

The annual appropriation for the department of public health for the fiscal year 1921-1922 was about $75,000, exclusive of the appropriation for the Department of Uncinariasis ($15,000) and the Yellow Fever Commission ($5,000).

(2.) Guatemala. - In 1906, the President of Guatemala, exercising special legislative powers accorded to him by Act of Congress, promulgated a sanitary code which is the organic public health law of the country at the present time. This sanitary code closely resembled the sanitary code of Mexico, which was adopted in 1902. By the provisions of the sanitary code. "the Executive, through his Minister of Government and Justice, exercises the supreme direction of the branch (of government dealing with) of public health."[7] To this end a supreme council of public health (Consejo Supremo de Salubridad Publica) was consti-

tuted, as well as departmental and local boards of health.[2] The boards of health, general, departmental and local, were to "concern themselves, by preference, with the sanitary service of the nation and that of each individual locality, carrying out all such measures as may be deemed expedient, without other reserve than that of rendering an account to the proper Minister, when dealing with matters of a general character, or whose importance render such procedure necessary."[7] In addition to these boards of health, delegates, commissioners, and adjuncts (Delegados, Comisionados y Adjunctos) of the council were to be appointed, as circumstances might require. The members of the board of health were to be "vested with public authority" and all the others were to be considered as agents of that authority. All municipal mayors and police agents are considered as delegates of the council, while all local physicians act as adjuncts (advisors) of the local boards of health.

The superior council of public health consists of five members "who shall be appointed by the Executive, without fixed terms of office and removable by him at will." It is composed of three physicians, a pharmacist and a lawyer, one of whom acts as a secretary. The president is the executive officer of the council and acting as such is nominally the health officer of the country.

The departmental boards of health are composed of (a) the departmental governor (Jefe Político), (b) the judge of the Court of First Instance, (c) the departmental physician (military), (d) the mayor of the department capital, and (e) a local delegate (Comisionado).

In the departments where a hospital exists, the director of the hospital takes the place of the judge of the Court of the First Instance as a member of the board. The local boards of health are composed of the mayor, who is president, and two members, one of whom is the local delegate of the council. The third member is a physician or a pharmacist; but if neither a physician (other than the Delagado) nor a pharmacist reside in the locality, the municipal secretary becomes a member of the board. The departmental board of health acts as a local board of health for the departmental capital. By law, all boards of health are required to meet daily.

Since no appropriation is made by government for the superior board of health, and no provision is made for raising funds locally for the departmental or local boards of health, it goes without saying that the members of these bodies receive no salaries. In case of epidemics, emergency funds are made available by special appropriation. At such times the president of the council and such special delegates as may be appointed for the purpose of combating

the epidemic receive compensation for their services. Under ordinary conditions, however, it may be safely assumed that the "Executive, through his Minister of Government and Justice, exercises supreme direction" in all public health matters, the council acting only in an advisory capacity.

Departmental and local boards of health are, in reality, non-existent, the civil authorities (departmental governors, chiefs of police, magistrates, etc. - especially the first named officials) administering all public health matters in their respective jurisdictions except in times of epidemics, when a delegate of the council may assume charge of sanitary administration in the district.

While some changes have been made recently, and efforts are being made to modernize the work of the health department, health administration in Guatemala is still far from ideal, and much remains to be done before effectual public health work on the part of the health department can be expected. A certain amount of public health work is done in the larger cities, and the Government has expended large amounts of money in sanitating the capital, Guatemala City, since the earthquake of 1918. On the whole, however, the country is the most backward of all the Central American countries in the matter of public

sanitation, and is greatly in need of modern public health legislation, backed up by substantial appropriations for carrying on the work of a modern health department.

The International Health Board has been conducting a campaign for the control of hookworm disease in the country since early in 1915. This campaign is conducted by a governmental agency (Department of Uncinariasis) which is a dependency of the council of public health. During the yellow fever epidemic of 1919 and 1920, the Yellow Fever Commission also cooperated with the health authorities of the country in combating the disease through a special sanitary commission organized along the same lines as the commission which directed the campaign in El Salvador.

(3) Honduras. The government of Honduras adopted a sanitary code based on the Mexican code in 1910. Under the provisions of this sanitary code a superior council of public health (Consejo Superior de Salubridad Pública) was established, but no responsible executive head of the council who should have direction of the public health activities of that body was provided for. As was the case in Guatemala, no effectual public health activities followed the adoption of this code, and in 1912 the President's Private physician was commissioned to make a study of public

health organization in the country and make recommendations leading to the reorganization of the sanitary service. As a result of this survey the sanitary code was revised and an inspector general of public health was appointed. This official was given very limited powers and it soon became apparent that in order to secure more efficient service still further reforms were necessary. As a result of changes in the sanitary code, which were made during 1917, a director general of public health was appointed. This official, while given more ample powers than his predecessor, the inspector general of public health, had been given, still derived his powers through the council of public health, which in reality never functioned, and as a consequence public health work made little progress under this form of organization. In 1920, still further changes were made, enlarging the powers of the director general of public health, and in 1922 the council of public health was abolished, a Direction General of Public Health taking the place of the council. As is the case in El Salvador, the direction general of public health constitutes the national department of health, which is under the direction of a commissioner of public health who is designated as director general. The director general is appointed by the President; his powers are broad and his authority in public health matters is almost unlimited. The law of

1917 creating the direction general of public health states: "The director general shall make effective all the hygienic and sanitary regulations of the sanitary code and its revisions." The department of public health as at present constituted, consists of the following sections or divisions:

1. Director General (Section of General Administration.);

2. Section of Laboratories (Chemical, Bacteriological and Anti-Rabic),

3. Section of Vaccines and Serums (in reality a part of the Laboratory service),

4. Section of Rural Sanitation (Division or Department of Uncinariasis);

5. Section of Venereal Disease, Tuberculosis and Malarial Prophylaxis;

6. Section of Veterinary Medicine.

7. Section of Sanitary Delegates and Sanitary Police.

The Republic is divided into five sanitary districts, each of which is presided over by a district health officer, who is called a sanitary delegate. These sanitary

delegates are practicing physicians who devote only a part of their time to health work. The sanitary district comprising the capital, Tegucigalpa, is under the direction of the director general. In the capital there is a section of medical and dental inspection of schools as well as sections dealing with disinfection, burials and cremation. Special sanitary inspectors are provided for the capital, and for the remainder of the country a body of sanitary police is now being organized. These sanitary police are to be trained as sanitary inspectors, but will have all the powers of civil police when dealing with sanitary matters. This will obviate, to a great extent, the laxness in law enforcement which always ensues when the enforcement of sanitary regulations is left in the hands of the civil police. This body of sanitary police is to be under the direction of a chief sanitary inspector. Violations of sanitary laws are punishable by fines, which will be imposed by the director general of public health or his sanitary delegates, and collected by the sanitary police.[8]

As will be seen from the foregoing brief description of the health department as it now exists, Honduras has a health organization that should prove effectual in its efforts to protect the public health. The powers of the health department are ample, almost to the point

of being arbitrary. This is necessary, however, in a country where law enforcement is lax and where special privileges, depending upon political influence and social position are commonly recognized by all civil authorities.

The department of health is supported by special imposts on articles which are not considered prime necessities, as well as special import duties on all articles imported from abroad rather than by special appropriations by Congress. From these sources $50,000 to $60,000 are derived annually and this amount will increase as foreign commerce increases.

During the yellow fever epidemic of 1919 and 1920, the Yellow Fever Commission of the International Health Board cooperated with the health department in combating the disease through a special sanitary commission similar to the commissions which were organized for this purpose in El Salvador and Guatemala. At the present time the International Health Board is cooperating with the health department in the campaign for the control of hookworm disease as well as the reorganization of the laboratory service.

(4) Nicaragua. In 1915 the advisory board of the Medical Faculty of the University of Leon was constituted

as the council of public health (Consejo Superior de Salubridad) of the Republic of Nicaragua. The secretary of the council, acting as the executive officer of that body, was, nominally, the health officer of the country. His powers were so limited, however, as to scarcely justify the term health officer. In the intervals of the meetings of the advisory council the secretary merely attended to the correspondence of the council, rarely taking any action in matters which required the sanction of the council. The council met monthly and at such other times as might be required, the president of the council calling that body together when advised by the secretary that some important matter that required action on the part of the council was pending. The members of the council received no salary, since no appropriation was made by the Government for that purpose. The council received certain fees as the medical licensure board of the country, and received a small appropriation from the Government to cover janitor and clerical expenses. In 1919, a Faculty of Medicine (teaching) of the University of Granada was organized, and this faculty, in turn, was created a council of hygiene. Since there could not be two superior councils of hygiene, having equal powers, for the entire country, the Leon council was given jurisdiction over the part of the country included in the legal jurisdiction of the Appellate Court of Leon, which is composed of the departments

of Leon, Chinandega, Matagalpa, Estili, Jinotega and Nueva Segovia, and the Granada council was given jurisdiction over the rest of the country, namely, the departments of Managua, Masaya, Carazo, Granada, Rivas, Chontales, Bluefields and the districts of San Juan del Norte, Prinzapolka and Cabo Gracias a Dios. This divided authority in public health matters rendered it almost impossible to make any progress in health organization in the country. The members of the two councils of hygiene called attention to this fact repeatedly, as complications arose from lack of unity of direction. An example of the complications which might (and did) arise may be cited in the matter of quarantine. During the early part of the epidemic of yellow fever in El Salvador (1919), the council of hygiene of Leon advised that certain quarantine regulations be enforced in order to prevent the invasion of yellow fever. Such regulations were put into force at the ports of Corinto and Tempisqui, which were in the jurisdiction of the Leon council. The Granada council advised against such regulations, however, and as a consequence no quarantine resptrictions were enforced in the port of San del Sur which is under the jurisdiction of the Granada council. This anomalous situation was called to the attention of the President and steps were taken to bring about the consolidation of all public health authority in one directing body early in 1921. At this time the President

appointed a special commission to draft an organic public health law for the country which would remedy these defects. This commission submitted a preliminary report in August of that year; but it was not deemed advisable to make radical changes at that time, or for some time later, on account of the disturbed condition of the country, which was then under martial law. The commission has drafted a bill to be presented to the next session of Congress (1923-1924), and if this is passed, thus becoming the organic public health law of the country, a complete reorganization of the public health agencies of the country will result. The bill provides for the establishment of a national department of public health which shall have charge of the administration of all public health matters in the country. The department of public health will be under the direction of a commissioner of health (Director General de Salubridad Pública), who will be responsible to the Government for the efficiency of his department. As the responsible directing head of the health department, he will be given broad powers. He will be responsible to the Government directly - and not through a board of health. A council of hygiene is provided for; but this council will act only as an advisory body to the commissioner of health and will have no connection with Government except such connection as may be derived through the commissioner of health. This council of hygiene will be composed of the heads of

divisions, who will be ex-officio members of the council, a representative from each of the two Faculties of Medicine, and a legal advisor. The commissioner of health will be president of the council, as is the case in El Salvador. Seven divisions of the department of health are provided for, namely: Division of administration and vital statistics; division of local public health organization; division of communicable diseases; division of laboratories; division of sanitary engineering; division of rural sanitation (including malaria control) and a division of school hygiene. The commissioner of health, as head of the division of administration (which will include vital statistics) will be the registrar of vital statistics; and as head of the entire department he will exercise a certain amount of administrative control over all other divisions of the department. On account of the lack of a sufficient number of trained men to fill the positions of chiefs of divisions, for the time being two or more divisions will be consolidated under the direction of one division chief. The commissioner of health will be a full-time official; division chiefs may or may not devote their entire time to public health work, this being dependent on the appropriations which may be secured for the maintenance of the health department. The country will be divided into four or more major health districts, which will be in charge of district health officers, or deputy commis-

sioners of health. These major health districts will be divided into minor health districts, which will be in charge of local health officers. These minor health districts will comprise one or more municipalities, depending on the population of the municipal districts comprised in the health district. Insofar as possible, these minor health districts will be in charge of medical health officers; but where it is not possible to secure a medical health officer for the district, a sanitary officer who has received training in public health work, will be made health officer of one of these minor health districts. A body of sanitary inspectors, who will have a certain measure of police power, is provided for. These sanitary inspectors will be departmental and local; the departmental sanitary inspectors will have charge of all the local sanitary inspectors in the department. The local sanitary inspectors will be in charge of all sanitary inspections in a minor health district, under the immediate direction of the local health officer.[9]

The International Health Board has cooperated with the authorities of Nicaragua in a campaign for the control of hookworm disease since early in 1916. The Yellow Fever Commission of the Board cooperated in the campaign against yellow fever through a special commission similar to the commissions which have already been referred to, the

Board's director in Nicaragua being technical director in charge of all yellow fever control measures. Recently, a hygienic laboratory, which is to be the central laboratory of the division of laboratories, was organized. The division of public health laboratories of the International Health Board cooperated with the Government in the organization of this important branch of the embryonic health department.

The interest of the Government in public health matters is growing daily and it is safe to say that Nicaragua will make substantial progress in health organization and that public health work will increase in scope as well as in efficiency as a result of the impetus which has been given it by the Executive during the last two or three years.[11]

(5) Costa Rica. As has already been seen, Costa Rica has been the most fruitful of all the Central American countries in the production of sanitary legislation, frequent changes in the sanitary organization of the country taking place as the result of some new decree. The Faculty of Medicine was the only existing public health authority from 1879 until 1920, when a bill providing for the establishment of a national department of public health was introduced into Congress. This bill provided for a direction general of public health (Dirección Gen-

eral de Salubridad) which should be similar to the organization now existing in El Salvador and Honduras. As passed, however, the health administration of the country was left in the hands of a council of hygiene (Consejo Superior de Salubridad). This council of hygiene was composed of a president and three medical members, the Minister of Police being president of the council by virtue of his office. No responsible directing head of the health service was provided for and as a consequence, public health work made little progress under this new organization. In 1921, however, the direction general of public health, as provided for in the original bill, was created. The health department as now constituted consists of a division of administration (which also includes vital statistics), a division of vaccination, division of venereal prophylaxis, division of rural hygiene, division of school hygiene and a division of sanitation, hospitals and lazarets. The department is under the direction of a commissioner of health who devotes his whole time to public health work. As the responsible directing head of the health department he is given large powers, the national council of hugiene acting only as an advisory body to the director general of public health. Two divisions of the health department (rural hygiene and school hygiene) have been operating very successfully for several years. The Department of Ankylostomiasis (now the division of rural hygiene) was

organized in 1913. In 1914 the department was reorganized, the International Health Board cooperating with the Government in carrying out widespread campaigns for the control of hookworm disease in the country. This cooperation was continued until the end of 1920, when the health department assumed full responsibility for the campaign. The division of school hygiene was organized in 1914 but did not do very effectual work until 1916, when the service was completely reorganized and put on a modern basis. Since that time it has done splendid work, the work in the capital, San José, comparing favorably with that done in cities of the same size in the United Stated. The nurses of this department also do a certain amount of visiting nursing and pre-natal and child welfare clinics have been established as a part of this nursing service.[10]

While health organization in Costa Rica has been greatly hindered in recent years by political, as well as economic conditions, great progress has been made and Costa Rica bids fair to take front rank, along with El Salvador, in matters of health organization. Much practical public health work has been accomplished in the country in spite of disturbed political conditions, and the intensive educational campaign which was conducted as a part of hookworm control measures has done much to arouse a public

health conscience which will not let public health work die, as is so often the case in countries where an enlightened public opinion is not created as the foundation stone upon which the entire public health structure is built.

5. Summary and Conclusions. - From the foregoing review of the historical development of health organization in Central America, as well as from the descriptions of the health departments of the different countries, it will be seen that these countries are not so backward in this important field of governmental activities as is generally thought to be the case. Important steps toward organizing health departments were taken very early by some of the Central American governments, even antedating the beginning of health organization in the majority of our American states. These efforts met with little success, in the main, for reasons which will be discussed later. They constituted very definite steps toward protecting the public health through organized governmental agencies, notwithstanding. Their failure was due to a multiplicity of causes, and it will be possible to discuss only the most important of these causes in this paper. Briefly, the causes which militated against the success of these early efforts at health organization, and which

are still operative, although to a less extent, will be treated under three headings: First, the lack of popular self-government; second, the fear of vesting too much authority in a single individual; and third, the fundamental psychology of the governing classes of the countries.

(1) The Lack of Popular Self-Government. - While the Central America republics adopted constitutions modeled on the constitution of the United States, popular self-government is far from being a *fait accompli*, even at the present time. Sir James Bryce puts the matter perhaps too strongly when he states that "To expect peoples so racially composed, very small peoples, spread over a vast area, peoples with no practice in self-government, to be able to create and work democratic institutions was absurd, though the experience which their history has furnished to the world was needed to demonstrate the absurdity."[11] These Central American countries were, in the past at least, republics in name only. The masses of the people had little to say in affairs of government, this being left entirely in the hands of a small minority, generally spoken of as the "governing class". As a natural result of this system of government, health organization based on popular enlightenment and supported by an enlightened public opinion was impossible. Such health organization as was attempted had, of necessity, to adapt itself to existing governmental

conditions and was autocratic in nature. While a certain amount of autocracy was necessary, such power was often abused, took little cognizance of public opinion and made little effort to enlighten the public in public health matters. Public health work of an important nature can be accomplished under such conditions, but it is doubtful if much lasting good can be done against the will of the masses of the people. Certainly no permanent health organization can accomplish all that such governmental agencies should accomplish in protecting the public health without the support of an enlightened public opinion. This is true of Central America as it is true of all enlightened countries where popular self-government is attempted, if not completely achieved.

(2) The Fear of Vesting too Much Authority in a Single Individual. - This second factor has militated in no small degree against the development of efficient health organization in Central America. President Goodnow assures us that "the desirability of single-headed departments has come to be regarded as unquestionable, and it is almost heretical at the present time to express the conviction that the board form is preferable."[12] This may be true of the United States, but it is not true of Central America. The Central American governments are highly centralized, almost unlimited powers being vested

in the Executive. The cabinets of most of the Executives of the Central American republics are purely advisory bodies, little executive authority being delegated to the heads of the different governmental departments. In most of these countries this is entirely necessary and only those who are unfamiliar with conditions will venture to criticise this centralization of power in the Executive. This fear of delegating full executive powers to the heads of government departments is shown very clearly in the first paragraph of the organic public health law of Guatemala (already quoted), which states that "the Executive, through his Minister of Government and Justice, exercises supreme direction of the branch of government having to do with the protection of the public health." The President of Costa Rica, vetoing the bill providing for a single-headed department of health, expressed this same fear and stated, privately - if not publicly, in his message returning the bill to Congress with his disapproval - that he would not dare delegate such unlimited powers to any single individual as the proposed bill would give to the head of the health department. When such powers are delegated to the head of a health department, it goes without the saying that this official must be chosen by the Executive, who also reserves the right to remove the official "at will" (Cf. sanitary code of Guatemala). This, of course, strikes at the root of one of the fundamental principles of health admin-

istration, namely permanent tenure of office. The head of the health department should be a trained sanitarian, as well as a tried executive, and should remain in office as long as he discharges the duties of his office satisfactorily. Unfortunately, this is not always the case, even in the United States, the executive heads of state and municipal health departments often being removed when the administration changes. It is less true in Central America, where it is more vitally necessary that the minds of all of the heads of governmental departments "go along" with that of the Executive. We must remember that in Central America, as elsewhere, health administration is a part of government and necessarily suffers the vicissitudes of government in general. This frequent removal of the executive heads of health departments, while it is to be deplored, does not always do irreparable harm. After all, the executive head of a health department is purely an administrative officer, and if he has trained men under him in charge of the different bureaus, or divisions, the workings of the health department should not be seriously interfered with on changing the head of the department - provided the new health officer does not interfere too extensively with his division chiefs in the performance of their duties. It is for this reason that the inevitable removal of the heads of the health departments of the Central American countries should not be considered an insuperable object in the way

of the progress of health administration in these countries. If trained public health workers can be secured to take charge of the different bureaus, very efficient public health work can be done under health commissioners of mediocre ability and relatively little training in public health work. The appointment to the position of health commissioner will, to a certain extent, always be influenced by political considerations. If appointments to positions as division chiefs are made on some sort of a merit basis, and these officials are given more or less permanent tenure of office, this tenure of office being dependent upon their ability to "make good", a definite program of public health work can be followed and much accomplished toward protecting the public health in spite of frequent changes of administration. This is the case with most of the state health departments of the United States. Health commissioners are changed frequently, but chiefs of bureaus who have demonstrated their ability are rarely changed. If such conditions as will guarantee more or less permanent tenure of office to the division chiefs and their subordinates can be secured for the health departments of the Central American republics, great progress in practical public health work may be expected. Frequent changes in the executive heads of the health departments will be inevitable.

(3) The Fundamental Psychology of the Governing Classes. - This third factor which militates against the progress of practical public health work in Central America is one which may not be so clearly outlined as the two factors which have already been discussed. The inhabitants of these countries are of mixed Spanish and Indian stock. Among the governing class the Spanish strain of blood predominates, although at least 90 per cent of the inhabitants should be considered as belonging to the meztizo class, in which the Amerind strain of blood predominates. As a result of this admixture of blood no very prominent racial traits of either of the parent races are retained. Their training in governmental matters has been derived from the old Spanish colonial system of government, traces of this old system being at the present time evident to even the most casual observer, in spite of the fact that these countries have possessed nominal democratic republican formsof government for more than a century. Under the Spanish colonial regime minor colonial officials, far removed from the seat of government, often established small oligarchies which were little influenced by governmental policies emanating from provincial governors acting as representatives of the Royal Colonial Service. On receiving an order from higher officials these minor officials would acknowledge receipt with the statement that the order would be obeyed, but they would

make mental reservations which may be best expressed in the Spanish aphorism, "Obedezco, pero no cumplo" (I obey, but do not comply). Self interest guided these officials in all of their official dealings, the public weal being entirely secondary. Only rarely did a spirit of public service develop in one of these officials, and when it did that official was likely to have his hands tied by his self-seeking superiors. More than four hundred years of such training did not fail to leave its impress on the character and psychology of the governing classes in these countries. The masses came to look upon government as a necessary evil, to be borne in patience. They expected nothing but opression from government and the idea that any government should be conducted for the "greatest good to the greatest number" was entirely foreign to them. A hundred years of effort at uprooting this old system of government has not been entirely successful. The masses of the people still do not expect unselfish public service from their public officials. The bearing that this had on the development of public health work is apparent. Public health work, as no other branch of government activity, depends on an enlightened public opinion and the growth of a "public health conscience" which demands more and more service from government. Such an enlightened public opinion did not exist in ever so slight a measure in the Central American countries until within quite recent years.

As a result of the educational features of the extensive campaigns for the control of hookworm disease which have been conducted in all of these countries within recent years, the public is being educated along these lines and a growing public health conscience is now discernible in all of them. Much remains to be done along these lines, however. In most of the countries the system of education followed is archaic, being modeled on the old classic educational system of southern Europe. In this system the theoretical is stressed at the entire expense of the practical. This is as might be expected. Latin-American people are not practical; their inherited tendencies are all against them in this respect. Unlike their Anglo-Saxon brothers, they are likely to reason along visionary and theoretical lines and to overlook the practical problems which are "under their very noses". Health officials of these countries have, in the past, looked upon their duties as being purely advisory in character, their responsibilities ending when due instructions for remedying a sanitary evil were issued. The idea of applying the necessary measures to a given public health problem is one entirely new to them. In fact, it may be stated that they are not alone in this, this being the tendency of public health officers in many of the countries of the world, not excepting some of our States. This tendency is more wide-

spread in Latin-American countries, however, and may be considered as one of the racial tendencies which militates against practical public health work in these countries. It will require long and patient effort in guiding public health work along purely practical lines to correct this fundamental defect in health organization in Central America. For this reason all public health organization should begin with local public health units, rather than with the organization of topheavy public health departments which establish little contact with the people through such local units. Such units can demonstrate the value of practical public health measures of a more elementary nature - measures which are within the bounds of possible achievement by the people themselves. In a word, public health organization in Central America should be a growth from below upward, rather than from above downward, as is now the tendency. As already stated, local public health organization is the foundation upon which successful health organization rests and upon which the future of public health work in Central America depends. In passing, this may be said to be true of public health work in the individual states of the United States.

The republics of Central America, insofar as health organization is concerned, may be considered analagous to our American states. While a confederation of the Central

American states existed for a time after their separation from Spain, no federal government, as compared with the federal government of the United States (or even Mexico) ever really existed. The executive departments of the different republics are essentially comparable to the executive department of an American state. Each republic is divided into departments which correspond to the counties of an American state, these departments being again divided into municipalities, no township jurisdictions existing in the departments. Such a form of governmental organization lends itself peculiarly to the development of highly centralized national public health departments such as exist in a number of the American states. While this is greatly advantageous in many ways, the tendency to organize from above downward and neglect local public health organization almost entirely is a very strong one and must be counteracted if practical public health work is to give its full quota of results in Central America. Many excellent public health laws exist on the statute books of these countries but most of these laws have become "dead letters" because of lack of enforcement. Enactment of health legislation is an easy matter; carrying such legislation into effect - in a word, translating it into real public health service - is an entirely different matter. If health organization is to fulfill its real mission in Central America, less <u>enactment</u> and more

fulfillment of sanitary regulations must be the rule. In fact, this rule is applicable anywhere.

From a personal experience lasting over several years, I can state with some emphasis that the tendency toward practical application of sanitary regulations in bettering public health conditions is growing rapidly in Central America. Practical, well-trained public health workers are greatly needed, however, and this need must be met in some way. Schools of hygiene and public health in which public health workers can be trained in their own environment would best meet this need, and it is to be hoped that some institution of this nature may be founded in one of the Central American republics within the near future. The Gorgas Memorial would seem to furnish a possible nucleus around which such a school might develop; and if contacts with the admirable public health work which is being performed by the sanitary authorities of the Panamá Canal Zone could be established by such a school, excellent training might be afforded young medical men from Latin-American countries who select public health medicine as a career. In fact, more young medical men could be persuaded to adopt public health work as a career if such an institution were available in one of the Latin-American republics, where living conditions are more or less identical with those in their own country and the

advantages of a common language are to be had. Until such an institution is available, public health schools of other countries, in which entirely different conditions exist, must be depended upon for training the men who are to become the leading health workers in these countries. The training obtained in such centers must be supplemented by extensive field training in a country where conditions are more or less identical with, or at least comparable to those existing in the country where the student is destined to work. Unless such field training can be made available to the students of public health from these countries, their training will not be such as to fit them adequately for public health work in their own country.

Until such a time as properly trained men are available the health departments of the Central American republics must, of necessity, be manned by untrained, or only partially trained public health workers. As a consequence, health organization will suffer many lapses before conditions even approximating the ideal will obtain. Progress will be made- is being made - in spite of all the difficulties which are encountered. For a long time to come, however, many public workers who are insufficiently trained in practical public health work will fill positions as executive heads of the health departments as well as those of the different divisions of these departments and

as a consequence public health work will suffer. The tendency at the present time of all the Central American governments is toward the development of health departments which will render as large a measure of service in protecting the public health as the economic conditions existing in the several countries will permit. This, alone, warrants the assertion that public health work will make great practical progress in Central America in the future in spite of the numerous difficulties which will have to be overcome, as well as the prediction that health organization will continue to advance along modern lines, as has been the case within recent years.

REFERENCES

1. Ortiz-Cartin, Bienvenido: Compilación de Leyes, Decretos y Circulares Referentes á Medicina é Hygiene del Ano 1821 Hasta 1920. San José, Imprenta Nacional, 1921.

2. Chevers, Norman: A Treatise on Removable and Mitigable Causes of Death, Calcutta, Bishops College Press, 1852, pp. 28-32.

3. Simon, Sir John: English Sanitary Institutions, London, Cassell and Company, 1890, pp. 90-110.

4. Saunders, W.H.: A Compend for the Members of the Organized Medical Profession of Alabama, Montgomery, Brown Printing Company, 1913.

5. An Act to Recharter the South Carolina Medical Association and Establish a State Board of Health and Define its Duties, Approved December 23, 1878. (Copy of the Act furnished by Dr. James A. Hayne, State Health Officer.)

6. Sanidad Salvadorena, Memoria Presentado al Sexto Congreso Médico - Latino - Americano, Hadana, Cuba, Noviembre 19-26, 1922. San Salvador, Imprenta Nacional, 1914.

7. Código Orgánico del Servicio de Salubridad Pública Emitido, en 1906. Guatemala, Tipografia Nacional, 1911.

8. Unpublished reports of the Director for Honduras, International Health Board.

9. Memoranda on Health Organization furnished by the author to the commission appointed for the purpose of drafting the public health law.
   Memoranda on public health organization in Nicaragua by the Director of the International Health Board in Nicaragua.

10. La Gazeta; diario oficial: San José de Costa Rica, Martes 27 de Abril de 1920.
    Memoranda for the Director of Costa Rica, International Health Board.

11. Bryce, Sir James: South America, p. 539.

12. Goodnow, F.J.: Municipal Government, p. 225.